

EPA'S RESPONSE TO THE SCIENCE ADVISORY BOARD (SAB) PANEL COMMENTS
ON THE
DEMOLITION AND DISPOSAL OF HURRICANE DEBRIS
AND CHARACTERIZATION STUDY OF
CONSTRUCTION DEBRIS IN AN AIR CURTAIN DESTRUCTOR

In the aftermath of Hurricane Katrina and Hurricane Rita, and the subsequent flooding, the Louisiana Department of Environmental Quality (LDEQ) asked EPA to review its approach for addressing demolition and disposal of specific structures in Jefferson Parish, Orleans Parish, Plaquemines Parish, and St. Bernard Parish. One option for reducing the amount of debris that was proposed involves the demolition of buildings and burning the resulting debris in an Air Curtain Destructor (ACD). This option involves not inspecting the structures for asbestos and removing the asbestos in accordance with the Clean Air Act National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, and for those buildings in danger of imminent collapse, not treating the debris as though it contains asbestos in the absence of an asbestos inspection. Treating the debris as if it contained asbestos would require disposing of the debris in a landfill that meets the NESHAP requirements. LDEQ instead proposes, at least for some of the debris, to reduce the volume of debris by burning in ACDs.

The reasons that LDEQ provided for wanting to pursue this option included: 1) the lack of availability of trained asbestos personnel to inspect and remove asbestos given the number of houses involved; 2) the massive amount of debris and the lack of sufficient landfill capacity for the debris; 3) the time required to: a) locate asbestos trained persons and arrange for inspections to occur; b) find an available qualified lab; c) have the lab conduct the analysis; d) arrange a location for land filling, and e) arrange transportation versus the need to expedite the return of citizens to their homes; 4) the need to focus the limited trained asbestos personnel and qualified laboratories on inspecting non-residential buildings that are more likely to have amphibole forms of asbestos; and 5) a Quarantine Order from Louisiana Dept. of Agriculture & Forestry that prohibits moving cellulose and wood products outside certain parishes unless the material is fumigated for the Formosan termite.

To respond to this request, EPA was considering issuing a No Action Assurance (NAA) to allow the proposed activities associated with source reduction by burning debris from residential structures (four units or less) in an ACD. The NAA being considered was for a six month period. In addition, the NAA imposed conditions that EPA developed to minimize potential adverse public health and environmental effects from the demolition and disposal activities. As one of the conditions, EPA proposed to require a parametric evaluation burn to identify optimal operating conditions and to determine potential releases. The EPA specifically asked for the SAB Panel's review of the Agency's proposed approach for conducting source emission characterization to

establish optimum operating parameters and to assess potential releases, i.e., a parametric evaluation. This evaluation was intended to determine if the chrysotile form of asbestos, which is the type of asbestos typically found in residences, would be transformed into forsterite under the proposed burn conditions. Although available data indicates that transformation occurs at the temperatures expected in the ACD, the Agency recognizes the need for more data on whether transformation of chrysotile asbestos occurs under field conditions and the need to evaluate the possible release of additional pollutants. The minutes of the SAB consultation held on October 5, 2005, are posted at <http://www.epa.gov/sab/hurricane> .

Summary of comments and recommendations:

EPA has provided a matrix with a brief summary of the SAB Panel's comments and with EPA's more detailed response. In addition to the specific responses, EPA has provided a brief overview of its responses to the SAB Panel's comments below.

The SAB Panel raised concerns about pollutants that may be released during the burning of debris. The Agency shares these concerns, and after further consideration, has decided only to allow burning necessary for the parametric evaluation study to proceed until the Agency can assess the results from that evaluation. In response to the concerns raised by the SAB Panel and based upon the Agency's own consideration of the LDEQ proposal, EPA plans to proceed very cautiously to ensure that its actions protect public health and the environment. The Agency will decide whether or not to allow further demolition activities and burning by ACD under the NAA only after considering input from an internal Task Force, which will review the results from the evaluation study to assess the risks and make recommendations on whether to expand the NAA beyond the evaluation burns.

The SAB Panel provided a number of recommendations on how to conduct the study which EPA has incorporated. In response to specific comments, EPA has added to the list of pollutants that it will monitor.

The SAB Panel also raised a number of concerns over the operational practices and the need to ensure operator training. The Agency is requiring the LDEQ to develop a plan for operational requirements, which will incorporate the elements recommended by the SAB Panel. In addition, based on EPA's review of its own data and LDEQ monitoring data, EPA may modify the operating requirements to minimize releases.

The SAB Panel raised concerns as to whether the Agency has looked at alternative methods and the comparative risks. As a result, EPA has conducted a more thorough analysis of the alternative methods and the comparative risks. In addition, EPA will be able to better assess the risk posed by burning in an ACD by monitoring the burns being conducted by LDEQ as part of the parametric evaluation as well as LDEQ data from monitoring the demolition sites. EPA has provided additional information in the matrix. Please note that no single disposal option can provide the entire solution to handling the vast amounts of debris; multiple options will need to be utilized. There are

many ongoing efforts to address the debris including recycling and re-use of materials. Much of the debris will also go to landfills. The Agency will continue to work with the states impacted by the hurricanes to evaluate various options for addressing the debris issue.

The SAB Panel asked if the Agency has considered the option of doing nothing with respect to burning and disposal of debris. EPA believes that doing nothing is not an acceptable solution in that this option presents a different set of problems. Uninhabitable houses may be in danger of collapse, which presents a physical hazard to anyone entering them. Houses which are uninhabitable due to mold also present a different type of risk if people enter. Given that the houses being covered by the NAA will have been identified as part of a local government ordered demolition, it is likely that leaving them standing could attract persons (either residents or non-residents) to enter and thus, be at risk. If houses are demolished and left as piles of debris, there are potential risks from the release of asbestos fibers if it is left on the ground. It also poses potential risk if persons are trying to search through the debris and further disturbing asbestos containing materials. In addition, the longer demolition activities wait for those houses that require demolition, the more likely it is that the potential for exposure will increase as people return home.

It is important to remember when considering relative risks of alternatives that the NAA only addresses the NESHAP requirements for asbestos under the Clean Air Act. If EPA does not issue the NAA, then LDEQ would be required to inspect residences for asbestos and remove regulated asbestos containing material prior to demolition. If demolishing buildings that are in danger of imminent collapse, the NESHAP requires that the debris be treated as though it contains asbestos. The NESHAP requirements for landfilling asbestos containing material would apply. If the asbestos containing material is removed in accordance with the NESHAP requirements, the State could burn the remaining debris; EPA does not generally regulate such burning. By monitoring and collecting data from the evaluation burn, EPA will be able to develop optimum operating requirements and to determine if the NAA should be expanded. This information will also be provided to the State and local governments and the public which will help them determine if burning of houses, even those which contain no asbestos, is appropriate based on potential risks to public health and the environment.

**EPA's Response to SAB Comments on Demolition and Disposal of Hurricane Debris
(10/21/05)**

SAB Comment	Change Made or Rationale for No Change
<i>General Comments</i>	
<p>Consider a comparative risk assessment to other possible debris management options. The SAB suggested comparing risks associated with: doing nothing; temporary land filling at collection points in the parishes; significant processing, recycling and reuse at those points, and transport and long term land filling of debris outside the affected areas after treatment for Formosan termites; and other methods of management and disposal.</p>	<p>In response to the SAB comment, EPA has further investigated the various debris management options and considering the general risks associated with each option. In this investigation, EPA also considered the potential public health and environmental risks in addition to the feasibility in carrying out each option (including cost, time, availability of resources, and public acceptance). EPA does not believe implementation of any one option by itself will be sufficient to address the vast amounts of debris in a timely fashion to facilitate the return of residents to the New Orleans area. The affected area has little infrastructure to support many available debris disposal options. EPA expects that numerous options will be implemented at the same time.</p> <p>For example, doing nothing leads to public health risks associated with structurally unsound buildings which are unsafe to inspect. Furthermore, the presence of mold in these buildings can lead to severe allergic reactions.</p> <p>Space for temporary staging areas is at a minimum and the time-critical nature of the response will create unnecessary human health and environmental risks (e.g., leaching of constituents from piles, dust from piles, and truck traffic) and unwarranted costs (e.g., monitoring and engineering practices).</p> <p>Recycling and reuse is an option that would incur little cost (except for potentially addressing termites as noted below) and has high public acceptance. However, dependence on equipment and trained operators for proper recycling and reclamation would require significant amounts of personnel for segregating the waste and the time to process the wastes would likely be years.</p> <p>With regard to treating the debris for termites, EPA has approved certain pesticides for fumigating structures to control Formosan termites. However, additional regulatory requirements and risk mitigations measures may be necessary before these pesticides could be used to fumigate debris to prevent unreasonable risks to applicators, other</p>

	<p>workers, bystanders, and the environment. For example, sulfuryl fluoride is acutely toxic and shown in laboratory animal studies to cause neurotoxic and other systemic effects. Because of the potential hazards, EPA has restricted its use to trained, certified pesticide applicators who must wear extensive personal protective equipment in addition to following other protective measures. EPA would need additional information about the fumigation method of debris to better understand potential exposures and risks to humans and the environment and to determine what additional measures may be appropriate to ensure the fumigation could be accomplished without causing unreasonable risks to human health and the environment.</p> <p>Because of the potential risks that may be associated with burning construction debris by using air curtain destructors (ACDs), the Agency has decided to allow LDEQ to carry out a series of parametric evaluation burns using ACDs for vegetative debris, mixed debris, and construction debris. This will allow the Agency to evaluate 1) the best operating parameters to minimize pollutants, 2) to what extent the chrysotile form of asbestos transforms to the non-fiber form of forsterite, 3) to what extent asbestos fibers may be released, and 4) the risk from other pollutants that may be released. After completing the parametric evaluation burns and fully evaluating the monitoring data, EPA may provide, if appropriate, a written notice to LDEQ that further burning may proceed, subject to the conditions outlined the no action assurance (NAA) attachment.</p> <p>It is important to remember that the NAA only addresses the National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for asbestos under the Clean Air Act. If EPA does not issue the NAA, then LDEQ would be required to inspect residences (that are still standing and not in danger of collapse) for asbestos and remove any asbestos prior to demolition. The asbestos would need to be disposed of in accordance with NESHAP requirements. Given the estimated number of structures that LDEQ projects will require demolition, and the number of available trained asbestos inspectors and remediation personnel, and the lack of available landfill capacity, requiring strict compliance with all NESHAPS requirements would delay recovery efforts by a year. In addition, the remaining (non-asbestos) construction debris</p>
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	<p>could be disposed of by burning. EPA does not generally regulate such burning activities. For houses that are in danger of collapse, the NESHAP requires that the debris be treated as though it contains asbestos and disposed of in landfill that complies with NESHAP requirements. Again, if the asbestos is removed in accordance with the NESHAP requirements, the State could burn the remaining debris and EPA does not generally regulate such burning.</p> <p>The risks from pollutants, other than asbestos, as a result of any burning activity are likely the same, although one could argue the volume is likely to be less if the asbestos materials were removed and handled in accordance with the NESHAP requirements.</p> <p>EPA will use the results of the parametric evaluation burn to add additional protective measures as needed. In addition, EPA will make the information available to the State, local governments, and the public for decisions related to those activities that EPA does not regulate.</p>
<p>Concerns about adverse health and environmental effects of potential air-borne emissions and untransformed asbestos fibers during burning and handling ash residuals.</p>	<p>EPA agrees that this potential risk needs to be evaluated prior to allowing burning beyond the evaluation phase. By determining the extent to which this process may result in the release of asbestos fibers to the air as well as asbestos remaining in the ash, the Agency will be able to better assess and address the risk. EPA has revised the document establishing conditions for granting the NAA (NAA Conditions) to make it clear that: 1) all burn sites must be monitored for asbestos unless the NAA conditions are modified by EPA after phase 2 of the parametric evaluation is completed; 2) a representative sampling of demolition sites must be conducted; and 3) the ash must either be treated as though it is asbestos containing material and disposed of in accordance with NESHAP requirements or analyzed to determine if there is asbestos. Results from testing will help EPA determine if it should continue to authorize the use of ACDs for the disposal of demolition debris, and if so, whether there are additional operating conditions that can be identified to minimize emissions of harmful forms of asbestos and other pollutants. Any identified conditions will be incorporated into operating requirements. To ensure EPA makes changes as quickly as possible when needed, it is establishing an internal Task Force to review and assess the results on a weekly basis during testing.</p>

<p>The situation may require an approach similar to that of carefully developed and designed test burn campaigns typically used in municipal waste combustors to generate emissions data.</p>	<p>The experience gained during Municipal Waste Combustors (MWC) and Hazardous Waste Incinerators (HWI) testing is being incorporated into EPA's approach for ACD evaluation. However, these tests cannot be considered as test burns in the conventional sense, because of the more exploratory nature of the study. The Agency is including measurements for as many pollutants and potential pollutants as possible under the existing circumstances, including the need to do this expeditiously. Also, due to the episodic nature of the debris burning, EPA does not believe that the rigor for the evaluation needs to be equivalent to that for continuously operating MWC units.</p>
<p>The use of the ACDs might best be framed by: 1) combustion emission data useful for acute and chronic human health risk assessment; 2) combustion emission data useful for ecological risk assessment; and 3) detailed combustion performance data associated with 'preferred operational practices' that are translational to the emissions data.</p>	<p>Identifying "preferred operational practices" is one of the key purposes of the evaluation burns. An additional goal of the evaluation burn is to provide data that can be used in assessing risks and impacts associated with the use of ACDs to dispose of demolition debris. Although those assessments are beyond the scope of the current effort, the Agency recognizes the need to develop data that can be used for these broader purposes.</p>
<p>Efforts should be given to: 1) operator training; 2) burning approvals tied to meteorological data; 3) use of easy to implement and interpret combustion sensors for ACD operation that provide feedback to the operators about when and how to feed and mix wastes in the combustion zones; 4) development of a practicable and realistic debris processing and sorting strategy for each staging point; and 5) further clarify planning as to how data from detailed testing and routine monitoring will be managed and used to make improvements.</p>	<p>EPA agrees that these are important considerations and has added to the NAA Conditions a requirement that LDEQ's written plan related to operational parameters address a number of additional requirements such as 1) operator training; and 2) meteorological data.</p> <p>As EPA collects and analyzes data, it will identify "preferred operating practices" that will include use of easily operated and interpreted instrumentation such as temperature and opacity monitors that can provide immediate feedback to operators. A key purpose of the evaluation burns is to identify these and other easily monitored parameters that will guide operators and inspectors.</p> <p>The Agency believes the previous documents, such as LDEQ's debris management plans and previous EPA guidances, address the segregation of material. The NAA and its accompanying NAA Conditions will allow residences that are in danger of collapse, or uninhabitable,</p>

	<p>and being demolished under a Government Order to be demolished without removing the asbestos. EPA recognizes that for some of the types of debris, it may not be possible to segregate. Segregation will also be necessary just to ensure that the ACD functions well, e.g., material that will not burn will need to be removed at some point.</p> <p>To manage the data that is being developed from the evaluation burns as well as the data that is required to be developed by LDEQ, EPA is establishing an internal Task Force with representatives from various offices, including the Office of Research and Development and the Office of Air and Radiation. The Task Force will review the data as it comes in and make recommendations on changes needed either in the operational parameters, the NAA Conditions, or the NAA letter. EPA has also added a provision that LDEQ must take steps to ensure that any revised conditions are implemented in the field within 5 days of being notified by EPA or in accordance with a schedule approved by EPA.</p>
Better describe ACDs.	EPA has added more descriptive text and photographs into Appendix B.
In subsequent documents, clarify the federal/state/local jurisdiction about who is expected to be burning what type of debris in what type of burn system and where the burns will take place.	If burning at sites beyond the evaluation burn site is approved, it is possible that source reduction by burning with an ACD could be carried out by different entities including the State or Federal government entities or contractors. Regarding jurisdiction, EPA has added language to the NAA Conditions that makes it clear that there is Federal and State jurisdiction over a number of these activities. With respect to local jurisdictions, EPA added a condition that disposal of demolition debris under the NAA may only occur if the local government approves the use of ACDs for that areas.

If combustion is essential, then EPA may wish to consider the idea of temporarily staging small modular Municipal Solid Waste (MSW) combustors with modest air pollution control.	The capacity of modular units is roughly an order of magnitude lower than ACDs. However, EPA will give consideration to employing the modular MSW combustors. Discussions have been initiated with industry organizations to identify alternatives to ACD burning, but at this time those alternatives appear to be extremely limited. Although LDEQ's letter deals only with the ACD, it is EPA's understanding that LDEQ continues to review and consider additional options for disposal. It is unlikely that any one option will provide the entire solution to the debris problem.
<i>Comments on Charge Question 1.</i>	
Given the variability in debris properties, it is likely that temperatures will not uniformly be > 800 degrees C.	EPA agrees that temperature will not be uniform. The NAA Conditions require that the temperature be measured and until further guidance is developed based on the evaluation burns, EPA believes this condition needs to remain. The revised NAA Conditions provide for additional guidance on temperature requirements to be provided as data are generated.
The assumption should be made that chrysotile will be present in the fly ash, bottom ash, and fugitive ash.	EPA agrees and has changed the testing approach to require testing for different forms of asbestos in all effluents from the combustors during the evaluation burns. Final guidance to the operators will be based on data from those burns and the LDEQ monitoring data.
Segregation of debris that is likely to contain elevated levels of metals is desirable, if feasible. Such debris should be burned in combustors with additional emission controls, if such controls can be identified. Water misters may be suitable for such applications.	<p>The ability to segregate the debris based on the presence of metals will be extremely difficult. Where possible, metals (especially mercury) will be removed as outlined in the existing debris segregation guidance.</p> <p>While the SAB Panel indicates that water misters may be suitable, the efficacy of water misters for reducing emissions is currently unknown. In addition, the water mister may result in contaminated water that will need disposal. At this point, EPA has made no change to the plan for the parametric evaluation, except to note that the effluents will be tested for metals, and differences under different operating conditions will be noted. Adjustments will be made as appropriate as provided for in the NAA Conditions document and Appendix B.</p>
There are other elements of concern, including mercury (Hg) species, cadmium (Cd), zinc (Zn), arsenic (As) species and (chromium) Cr species.	A number of pollutants have been added to Appendix B in response to the SAB. In addition, extractive samples will be collected to allow subsequent analysis for as many compounds as possible. See response to comments on Charge Question 3.

Some metals may be found in the bottom ash, and thus are more readily managed when the ash is sampled, tested and disposed in approved disposal sites.	EPA agrees. Nothing in this document provides a NAA for Federal or state requirements applicable to the disposal of the ash.
It is not clear how operational changes or water misters will impact emissions of polychlorinated dibenzo-dioxins/polychlorinated dibenzo-furans (PCDD/PCDF).	EPA agrees and has added a note to the revised Appendix B plan for the evaluation burn to highlight the need to understand the impacts of water misters on such emissions. EPA will make adjustments to the plan as appropriate based on the data.
Debris composition and ACD operating practices are likely to influence the mass and size distribution of particulate matter (PM).	EPA agrees and has explicitly noted in the Appendix B plan that composition and operation are likely to affect PM emissions and has made adjustments to the plan as appropriate.
How will mold factor into worker safety during the handling of the debris?	In response to this comment, EPA has modified the Conditions document to state that during demolition and burning that workers must wear appropriate personal protective equipment to prevent potential exposure from the inhalation of asbestos fibers and other hazardous materials, including mold. There is also a statement in the Conditions document that nothing in the document provides a no action assurance for noncompliance with applicable OSHA requirements or applicable Worker Protection Standards under the Toxic Substances Control Act (TSCA). It is EPA's understanding that the U. S. Occupational Safety and Health Administration (OSHA) is involved in the emergency response operations in the area.
<i>Comments on Charge Question 2.</i>	
Carbon monoxide (CO) and hydrogen chloride (HCl) should be monitored to characterize acid gas emissions and combustion efficiency.	Appendix B has been modified to include HCl as a pollutant to be measured where possible. EPA does not believe it will be practical to continuously monitor HCl given the size of the monitors and the circumstances in the field that will not provide the infrastructure needed. Under the current circumstances, field personnel carrying out the evaluation burns will need to bring in their sampling equipment, PPE, food, water, and even living quarters, i.e., an RV. EPA intends to monitor CO, at least during the test runs.
Remote sensing techniques should be used.	In response to SAB's recommendation, open-path FTIR and opacity measurements have been added to Appendix B.

Meteorological conditions should be considered as a factor in scheduling burns.	Information on meteorological conditions and effects based on the evaluation burns will be provided to the appropriate regulatory authorities as one of the factors in determining when burning can occur. The NAA Conditions document requires LDEQ to develop operating requirements for the ACD which must address among other things meteorological conditions for when burning may occur including restrictions based on wind speed/direction, existence of low lying inversion layers, and select atmospheric stability conditions as well as method for communicating this to the persons carrying out the demolition/burning activities.
<i>Comments on Charge Question 3.</i>	
Several other pollutants should be added to the list, including total PM, wood smoke (as indicated by K), hexachlorobenzene, catechols, hydroquinones, vinyl chloride, nitrogen oxides (NO _x), reactive gaseous Hg, As, speciated Cr, Zn, and Cd. Panel recognized difficulties.	Several of these pollutants have been explicitly added to the list of pollutants to be measured, particularly total suspended PM, hexachlorobenzene, and NO _x . Extractive samples will be collected so as to allow subsequent analysis for as many of these compounds as possible. EPA shares the panel's concern that it will be difficult at best to adequately evaluate the presence or absence of all these pollutants in a timely manner.
<i>Comments on Charge Question 4.</i>	
A detailed test burn should be conducted to determine the effects of debris composition, ACD type, and ACD operation on parameters that can be related to risk. The test burn data can be used to develop preferred operating practices.	EPA agrees and has addressed the relationship of the parametric testing to subsequent operational guidelines in the evaluation plan. As EPA assesses the data from the evaluation burns, phase 1 and 2, it anticipates that this data and other monitoring data developed will be used to develop "preferred operating practices" prior to allowing the expansion of burning beyond the evaluation phases.
The testing should incorporate the full suite of tests conducted for an MSW test campaign. It would be prudent to monitor the burns and plumes of all ACD staging sites, if feasible.	EPA intends to conduct as many tests of as many pollutants as possible. However, it must be emphasized that EPA's understanding of the ACD process is not nearly as extensive as for MSW units. Although there are many similarities, there will be significant efforts required to adequately define the measurement and sampling methods, and the timeliness of these efforts is much more critical in this case than for MSW. The goal of the evaluation burns is to identify parameters that can be monitored at all burn sites to ensure that ACDs are operated as effectively as possible. The Conditions document limits use of ACDs for

	disposal of demolition debris to burning directly related to the Phase 1 and 2 evaluation burns. If the decision is made to allow LDEQ to burn debris other than as part of the evaluation after a review of the data from the evaluation, guidance developed during Phases 1 and 2 will be applied to all ACD sites, and will include easily measured parameters to be monitored in all locations. Ambient monitoring of all individual site plumes may not be feasible based on the availability of monitoring equipment and personnel, but will be conducted to the extent possible.
Side studies may be needed to evaluate the transient operations of ACDs.	EPA agrees that one of the more critical issues is the transient nature of both the combustion process and the debris feeding process. These aspects of ACD operation may well be the critical points in determining emissions of many pollutants, and may also require significant adjustment of measurement approaches. The Agency intends to account for the transient operations to the extent possible by identifying key transient operations (start, loading, shut down) as these occur and measuring parameters such as temperature and opacity. Where possible, extractive samples will also include emissions during these transient operations.
<i>Comments on Charge Question 5.</i>	
Clarification is needed to distinguish differences in methods and equipment needed for the detailed parametric characterization and routine operation.	The text in Appendix B has been clarified to identify instruments and approaches anticipated for the two types of evaluations.
The panel encourages the use of remote sensing techniques.	As noted above, EPA has revised its plan to include remote sensing techniques.
EPA should consider bulk techniques as a screening asbestos analysis prior to using transmission electron microscope (TEM) methods.	EPA agrees. Polarized light microscopy (PLM) techniques are traditionally used as a first screening technique for bulk analysis. For low level applications, the TEM technique can be more definitive.
The asbestos analytical method noted in the test plan is not appropriate for amphibole fibers.	EPA agrees. The ISO 10312:1995 is the appropriate technique for the parametric evaluation, and EPA has made modifications to address amphibole fibers.
Reactive gaseous mercury (RGM) species should be measured in addition to particulate mercury.	Speciated mercury (including RGM) samples will be collected for a limited number of test conditions. Appendix B has been changed to note this.

<p>The LDEQ Air Monitoring and Contingency Plan does not provide for sampling that would be adequate to accurately determine PCDD/PCDF.</p>	<p>The monitoring plan being referred to is actually EPA's plan. In attaching documents to the cover when transmitted to SAB, EPA inserted LDEQ in front of all the attachments to identify them as attachments related to the LDEQ request. Unfortunately, this seems to have caused some confusion. The Agency will forward this comment to the group that is finalizing that plan.</p>
<p>The LDEQ Air Monitoring and Contingency Plan specifies the use of ICP for metals analyses. X-ray diffraction approaches can provide screening-level information much more quickly.</p>	<p>See response above.</p>
<p>No guidelines were provided on acceptable concentration levels or lower limits of detection for the methods identified. It is therefore impossible to comment on whether the methods are appropriate for the testing, and no assessment of the suitability of the quality assurance (QA) program could therefore be made.</p>	<p>Efforts are underway to identify the most appropriate guidelines for determining the acceptable concentrations of the pollutants of concern. The air pollutant methods identified here are stack sampling methods, so although there may be uncertainties associated with the method of extracting a sample from above the ACD, the lower detection limits can be determined using the same approaches as for conventional stack sampling. Experience with previous test campaigns evaluating the same pollutants provides guidelines for sampling times and methods needed to attain detection limits in the range of expected emissions. This experience also provides guidance on the number of tests and conditions needed to begin characterizing the variability within a test condition and across different test conditions. These issues will be addressed in the detailed testing plan that will be developed in consultation with, and reviewed by, the QA staff.</p>